

BIOMOLECULAR-BASED ACTUATOR

ABSTRACT OF THE DISCLOSURE

This invention relates to actuators having biologically-based components, and methods of making and using the same. The actuator of the invention has a movable member that moves substantially linearly as a result of a biomolecular interaction of biologically-based components within the actuator. These actuators can be utilized in nanoscale mechanical devices to, e.g., pump fluids, open and close valves, and provide translational movement.